

at all prepared to say, that the whole of this species or even any individual plant of the species is entirely so. It is a very rare thing for a plant to bear cleistogamous flowers only. There are generally some few opening and exposing themselves to cross-fertilisation in the usual way, as though nature in any case were loth to depend entirely on self-fertilisation.

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TEMPERATURE OF THE BODY OF ECHIDNA HYSTRIX CUV.

BY N. DE MIKLOUHO MACLAY.

During my stay in Brisbane in July 1879, I had an opportunity of getting two *Echidna hystrix* for the study of the brain. I kept them for several weeks before I had time to begin the anatomical dissection, and they enjoyed the most perfect health, appearing very sleepy during the day, but more active during the night, and leaving a soup plate of milk thickened with some flour quite empty in the mornings. Being at last ready to examine the brain of one of them, and before injecting a dose of hydr. chlor., I took the opportunity of observing the temperature of the body of the animal. A very sensitive thermometer, placed in the cloaca, after lying there undisturbed for ten minutes showed the temperature of  $28^{\circ} 3$  C. (about  $83^{\circ}$  F.)

Believing that the large opening of the cloaca had interfered with the correctness of the observations, I made a small incision, just large enough to introduce the oblong ball of the thermometer into the cavity of the abdomen. The thermometer was left there over ten minutes and showed a temperature of  $30^{\circ} 0$  C. ( $86^{\circ} 0$  F.)

Not satisfied with this observation, and finding that the observed temperature of the Echidna is much below the known average temperature of the body of Mammalia, I repeated the observation on the other specimen. The second observation was made the 9th July. The temperature of the air that day was  $20^{\circ} 0$  C. ( $68^{\circ} 0$  F.) I made again a small incision, and observed the temperature, in this incision and in the abdominal cavity.

I found the temperature (the thermometer lying in the cavity for over ten minutes)  $26^{\circ} 95$  C. (about  $80^{\circ}$  F.) To be quite sure, and to prevent any mistakes, I introduced again the thermometer into the abdominal cavity in half-an-hour's time, and let it remain there for over fifteen minutes.

The very sensitive thermometer (made for observation of temperature of the human body on the sickbed) showed again the temperature of  $26^{\circ} 65$  C. (about  $79^{\circ}$  F.) Wishing to be quite sure about the observations, I induced Mr. R. T. Steiger, the Government Analytical Chemist in Brisbane, to place his thermometer in the cavity, and we obtained there with this other thermometer a temperature of  $78^{\circ}$  F., (or  $25^{\circ} 5$  C.), which result agreed very nearly with the previous observations.

Taking the average of these three observations, we find the mean temperature of the body of the *Echidna hystrix* to be about  $28^{\circ}$  C. (or,  $82^{\circ} 4$  F.)

Comparing the same with the mean temperature of Mammalia, which is, after Dr. J. Davy's observations of thirty-one different species,  $38^{\circ} 4$  C., or  $101^{\circ} 10$  F., we find that the mean temperature of the Echidna is about  $10^{\circ}$  C., or  $19^{\circ}$  F., lower than the former.

I have to add that in the month of July the Echidnas appeared to be in a very sleepy state, moving about in the day time only when disturbed. It is possible that during the winter months the Echidna is subject to a state of hibernation, which may also to a certain extent depress the usual temperature of the body.

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#### PLAGIOSTOMATA OF THE PACIFIC.

BY N. DE MIKLOUHO MACLAY AND WILLIAM MACLEAY. PART 2.

#### PLATE XX.

It is now exactly five years since we read a Paper with the above heading at a meeting of this Society, and which was published in the third volume of our Proceedings.